

# Miscellaneous Notes

## 1. TAXONOMIC STATUS OF *ROUSETTUS SEMINUDUS* (GRAY): (CHIROPTERA: PTEROPIDAE)

### INTRODUCTION

The Indian Fulvous Fruit Bat, *Rousettus leschenaulti* (Desmarest, 1820) and the Ceylon Fruit Bat, *R. seminudus* (Gray, 1870) are very difficult to separate. Jerdon (1874), Dobson (1876) and Blanford (1891) considered them as conspecific. On the other hand, Andersen (1912), Wroughton (1918), Tate (1943) and Ellerman & Morrison-Scott (1951) treated them as separate species. Recently, Brosset (1962, p. 10) was uncertain of their correct taxonomic status and wrote, in reference to *R. leschenaulti*, 'conspecific with *Rousettus seminudus*.'

In an attempt to settle the taxonomic status of *R. seminudus*, I made a thorough study of all the specimens of these two species available in the Zoological Survey of India and my findings are presented below.

### MATERIAL

The following material was examined:—

*Rousettus leschenaulti*: 9 ♂♂, 7 ♀♀ (preserved in spirit) and 8 ♂♂, 6 ♀♀ (skins from India and Burma.

*Rousettus seminudus*: 1 ♂, 2 ♀♀ (preserved in spirit) and 1 ♂, 13 ♀♀ (skins) from Ceylon.

### OBSERVATIONS

*Rousettus leschenaulti* and *R. seminudus* are said to differ from each other on coloration, amount of fur on the nape and shoulders, length of the forearm and the presence or absence of the upper first premolar.

#### *Coloration*:

According to Gray (1870), in *R. seminudus* the coloration of the upper side is chestnut brown (grey brown of *R. leschenaulti*), and

that of the upper chest white, lower chest and belly pale brown (fulvous ashy of *R. leschenaulti*).

In the dry skins of both species, however, the coloration of the upper side varies from yellowish brown to dark brown and that of the underside wood brown. As the coloration observed by the earlier authors and myself do not agree with one another, it seems that this variation may be individual or due to sex, age, season, age of skin, etc.

*Amount of fur on the nape and shoulders :*

Andersen (1912) stated that the nape and shoulders are semi-naked in *R. seminudus*, but in *R. leschenaulti* the fur in these regions is not unusually scarce.

An examination of my specimens reveals that the amount of fur on the nape and shoulders is variable, and that semi-naked nape and shoulders are found in specimens of both species.

*Length of the forearm :*

The length of the forearm in *R. seminudus* has been given as 79-85 mm., and that of *R. leschenaulti* 80.5-87.5 mm. (Andersen 1912). However, as may be seen from the measurements given by Andersen (1912) and those of my specimens (Table), there is complete overlap in the length of the forearm of the two species.

The Table also shows that there is no difference in the measurements of other external characters of the two species.

*Upper first premolar :*

Andersen (1912) found that the upper first premolar was present in the adult of *R. leschenaulti* but absent in that of *R. seminudus*. Although Wroughton (1918) did not say anything about this tooth in *R. seminudus*, Phillip (1935) found it present in his specimens of this species. From an examination of my specimens, however, I find that this tooth is present in all my examples of both the species except in one of *R. seminudus* (Z.S.I. Reg. No. 16684, ♀, Kandy, C. P., Ceylon) and one of *R. leschenaulti* (Z. S. I. Reg. No. 17952, ♂, Kumaon, U. P., India).

Furthermore, the shape and size of the skulls of the two do not differ and their cranial measurements (Table) are exceedingly close.

From the above observations it is clear that there is no character by which the two species can be separated from each other. *Rousettus seminudus* (Gray 1870) should, therefore, be considered a synonym of *R. leschenaulti* (Desmarest 1820).

TABLE

EXTERNAL MEASUREMENTS (in mm.)

*Roussetus leschenaulti* (Desmarest)

	Ear	Forearm	Pollex	2nd digit	Tibia	Foot and claw
4♂♂	19, 19, 20, 21	75, 83, 85, 86	22, 22, 23, 25.5	47, 52, 52, 53	34, 40, 41, 41	18.5, 19, 20, 21.5
3♀♀	18, 18.5, 19	72, 80, 86	21, 22.2, 27	47, 51, 53	36, 37.5, 41	18.5, 19.5, 20

*Roussetus seminuus* (Gray)

1♂	20	76	24	49	34	22
3♀♀	19, 20, 21	72.5, 75, 83	20, 20	44, 47	34, 38	18, 18, 20

CRANIAL MEASUREMENTS (in mm.)

*Roussetus leschenaulti* (Desmarest)

	Total length	Condyllo-basal length	Zygomatic width	Cranial width	Maxillary width	Palatal length	Inter orbital width	Upper tooth row	Lower tooth row	Mandibular length
3♂♂	36, 39, 40	34, 38, 38	20.5, 23, 24	15, 16, 16	10.5, 12, 12	19, 21, 22	8, 8.5, 9	13, 14.5, 15	15, 15, 17	28, 30, 30.5
2♀♀	37.5, 38	36, 36	21.5, 22	15, 15	11, 11	20, 21	8, 8.2	14, 14.5	15, 16	29, 29

*Roussetus seminuus* (Gray)

1♂	39	37	22	15.5	11	21.5	9	14	15.6	29.7
3♀♀	37, 38, 38.5	36, 36.1, 37.5	22, 23, 23.5	15.5, 15.8, 16	11, 11, 12	19, 20, 21	8.4, 9.9	13.6, 14, 14.5	14.5, 15, 16	28, 29, 29

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## 2. NOTES ON BARKING DEER, *MUNTIACUS* *MUNTJAK* (ZIMMERMANN)

In the July-August issue (1967) of *Hornbill* Newsletter some comments on the coloration of newly born barking deer aroused my interest and brought back to mind some observations of nearly fifty years ago! In the distant past I frequently observed and collected barking deer in several parts of India and frequently kept them as pets.

In the Western Ghats my observation go back many years, in the Naga Hills, Assam and Northern Burma (Chindwin Expedition, 1935), the base of the Himalayas and in some areas of southern India my observations were more restricted in time.

Normally, the Muntjac is a solitary animal for the greater part of the year, both by day and by night, but the sexes come together for a short interval during the breeding season. I have seen family